29th November, 2018

Director (SZ)
Ministry of Environment, Forest and Climate Change
Regional Office (SZ)
Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road
Koramangala, II Block, Bangalore – 560 034

Sir,

Sub: Submission of Six Monthly Environmental Clearance Compliance & Environmental Monitoring Reports (Apr '18 – Sept '18) –Chettinad Cement Corporation Private Limited–Existing Cement Plant (2.5 million tons per annum), Captive Power Plant (30 mw) & Captive Limestone Mine (4 million tons per annum) at Sangem K & Kallur Villages, Chincholi Taluk, Kalaburagi District , Karnataka

Ref: Environmental Clearance granted by MoEF vide Letter F.No.J-11011/399/2008-IA II(I) dated 18th Jun 2010 & 5th Mar 2012 for the Cement Plant, Captive Power Plant & Captive Limestone Mine

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We enclose herewith the **Six Monthly Environmental Clearance Compliance & Environmental Monitoring Reports** pertaining to our Integrated Cement Plant, Captive Power Plant & Captive Limestone Mine at Sangem K & Kallur Villages, Chincholi Taluk, Kalaburagi District, Karnataka for the period, from Apr '18 – Sept '18 .

a. **Environmental Clearance Compliance Report for Existing Plant & Mine (Apr'18 – Sept '18)- Appendix 1**
b. **Environmental Monitoring Report (Apr'18 – Sept '18) comprising of**
    i. Ambient Air Quality Monitoring - Consolidated Report - **Appendix 2**
    ii. Noise Level Monitoring - Consolidated Report - **Appendix 3**
    iii. Ground Water Quality Monitoring Report- **Appendix 4**
    iv. Surface Water Quality Monitoring Report- **Appendix 5**
    v. Stack Emission Monitoring - Consolidated Report - **Appendix 6**
    vi. Treated Effluent Quality Monitoring - Consolidated Report – **Appendix 7**
    vii. CSR Report - **Appendix 8**

Yours faithfully
for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Copy to :

1. Director (Industries),MoEFCC, New Delhi
2. Director (Non-Coal Mining),MoEFCC, New Delhi
3. Member Secretary, CPCB, Delhi/ Scientist 'E' & In-Charge, CPCB, Bengaluru
4. Member Secretary, KSPCB, Bangalore/ Senior Environmental Officer, KSPCB, Zonal Office, Kalaburagi /Environmental Officer, KSPCB, Regional Office, Kalaburagi

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CHETTINAD CEMENT CORPORATION PRIVATE LIMITED

(Plant & Mine)

Sangem K & Kallur Villages, Chincholi Taluk, Kalaburagi District , Karnataka

Environmental Clearance (EC) Compliance Report (Apr'18 – Sept '18)

EC granted by MoEF vide Letter F.No.J-11011/399/2008-IA II(I) dated 18th Jun 2010 & 5th Mar 2012 for Integrated Cement Plant (2.5 million tons per annum), Captive Power Plant (1 x 30 mw) & Captive Limestone Mine (4.0 million tons per annum, Mining Lease Area 422.940 ha)

A . SPECIFIC CONDITIONS

S.No	Specific Condition	Compliance Status
i.	No construction work at the proposed project site should be started without obtaining prior clearances / approvals for the linked mining component from the Indian Bureau of Mines (IBM) and State Government of Karnataka. A copy of the mining lease approval from the Indian Bureau of Mines (IBM) and State Government of Karnataka should be submitted to the Ministry and its Regional Office at Bangalore before initiating any construction work at site related to mining.	Before commencing the construction work at the Project Site, the following prior clearances / approvals had been obtained. a. Mining Lease from State Government of Karnataka b. Approved Mining Plan from Indian Bureau of Mines c. Consent for Establishment from Karnataka Pollution Control Board The copies of above mentioned clearances had been submitted to Regional Office of MoEF at Bangalore and MoEF, Delhi .
ii.	Rehabilitation and Resettlement Plan for the project affected population including tribals, if applicable, should be implemented as per the policy of the state Government in consultation with the State Govt. of Karnataka. Compensation paid in any case should not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.	There is no Rehabilitation and Resettlement involved in this project. Hence, this condition is not applicable.
iii.	Permission and Recommendations of the State Forest Department regarding impact	Conservation Plan for wild fauna submitted to State Forest Department vide our letter dated 7th

S.No	Specific Condition	Compliance Status
	of Cement Plant and Mining activities on the surrounding Chincholi reserve forest should be obtained and implemented. Further, conservation plan for the conservation of wild fauna in consultation with the State Forest Department should be prepared and implemented.	Jul 2011 . The recommendations of the State Forest Department received vide letter A4-Forest Department/Chettinad/Limestone/Kallur/CR-21/ 2010-11 dated 18th Jan 2012 had been incorporated in the Conservation Plan and submitted to Forest Department vide our letter dated 21st Feb 2012.The conservation measures are under implementation.
iv.	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the Karnataka Pollution Control Board. At no time particulate emissions from the Cement Plant including Kiln, Coal Mill, Cement Mill Cooler and Captive Power Plant (CPP) should not exceed 50 mg/Nm^3. Continuous on-line monitors for particulate emissions should be installed. Pyritess, Fluoride and Hg emissions should also be monitored. Interlocking facility should be provided in the pollution control equipment so that in the event of the pollution control equipment not working the respective unit (s) is shut down automatically.	Efficient Bag House/ESP/Pulse Jet Bag Filters had been provided for the stacks/transfer points to control the emission levels below the prescribed standards. Continuous Online Monitors for Particulate Matter have been provided for the Raw Mill/Kiln Stack, Clinker Cooler Stack, Coal Mill Stack, Cement Mill Stack and Captive Power Plant (CPP) Boiler Stack. As there will not be any Pyritess and Fluoride emissions from Cement and Captive Power Plant, monitoring of these parameters is not required. However, Hg emissions will be monitored for both Cement Plant & Captive Power Plant. Interlocking facility had been provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) gets shut down automatically.
v.	Possibilities should be explored for the proper and full utilization of gases generated from the Kiln in Waste Heat Recovery Boiler (WHRB) and a feasibility	Feasibility Report on utilization of gases generated from the Kiln in Waste Heat Recovery Boiler (WHRB) had been prepared and submitted to MoEF, Delhi and Regional Office of MoEF at

S.No	Specific Condition	Compliance Status
	report should be prepared and submitted to the Ministry and its Regional Office at Bangalore within 3 months from the date of issue of the letter.	Bangalore and WHRB has also been commissioned.
vi.	Data on ambient air quality (PM 10, SO2, NOx) should be regularly submitted to the Ministry including its Regional office located at Bangalore and the State Pollution Control Board/ Central Pollution Control Board once in six months. The critical parameters such as PM_{10}, NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer should be monitored periodically. Further, quality of discharged water should also be monitored [(TDS, DO, PH) and total suspended solids (TSS)]. The monitored data should be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain.	Ambient Air Quality Data (PM_{10}, $PM_{2.5}$, SO_2, NOx) are being monitored covering the core & buffer zones and reports are being submitted to the MoEF &CC, Regional Office, Bangalore, KSPCB & CPCB ,once in six months. As the nearest habitation from the present Mine working location is Kallur Village and is 1500 m away , there will be no adverse effect due to blasting in the mine and therefore peak particle velocities are not being monitored. However, when the mine workings reaches 500 m to the boundary, the monitoring of peak particle velocity will be commenced and carried out regularly. As per the numerical estimation done, the peak particle velocity calculated at a distance of 500 m is only 2.5 to 3.0 mm/sec, which is within the permissible limits prescribed by DGMS. There is no discharge of any waste water from the premises. However, the quality of treated water is being monitored for TDS,TSS & pH. The monitored data are being uploaded on the website and are also being displayed on a display board near the main gate of the company.
vii.	The company should install low NOx burner with Kiln/Calciner for control of NOx emissions below 400 mg/Nm^3.	High efficiency low NOx burner had been provided for the Kiln to control NOx emissions.

S.No	Specific Condition	Compliance Status
viii.	Secondary fugitive emissions should be controlled within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.	Secondary Fugitive Emissions are being controlled and by providing appropriate control measures as indicated below. Regular monitoring is also ensured. a. Concrete roads for truck movement b. Closed trucks/bulkers/trucks covered with tarpaulin for transporting materials c. Closed storage for Gypsum, Coal d. Closed silos for Fly Ash, Cement & Clinker e. Water Sprinkling arrangements f. Bag Filters at Transfer Points g. Good maintenance of equipment h. Greenbelt along the boundary of the Plant & Mine premises
ix.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 are being followed.
x.	Efforts should be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including Fly Ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.	All the raw materials are being transported after covering the same with tarpaulin. Fly Ash from other nearby Thermal Power Plant are in transported in bulkers only. No overloading permitted.
xi.	Fly ash should be utilized as per Fly Ash Notification, 1999 subsequently amended in 2003. Fly Ash should be stored in ash silo and 100% used in the cement manufacturing.	Fly Ash is being stored in Silo and 100% used in the Portland Pozzolana Cement (PPC) manufacturing.

S.No	Specific Condition	Compliance Status
xii.	The company should make the efforts to utilize the high calorific hazardous waste in the Cement Kiln and necessary provisions should be made accordingly. The company should keep the record of the waste utilized and shall submit the details to ministry's Regional Office at Bangalore, CPCB and SPCB.	Latest and high efficiency multi channel burner has been provided to handle the high calorific hazardous waste in the Cement Kiln. Only after obtaining permission from CPCB and KSPCB, the hazardous waste is co-processed. As advised, the records are being maintained for the hazardous waste utilized and the details are being submitted to MoEF & CC Regional Office, Bangalore, CPCB and KSPCB.
xiii.	Rainwater harvesting measures should be adopted for the augmentation of ground water at Cement Plant, Colony including check dams at main site. The company must also collect rain water in the mined out pits of Captive Limestone Mine and use the same water for the various activities of the project to conserve fresh water and reduce the water requirement from the ground water. An action plan should be submitted to Ministry's Regional Office at Bangalore within 3 months from date of issue of this letter. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.	Rainwater harvesting measures such as catch drains/garland drains, gully plugs and ponds provided to collect rainwater and separate solid particles. The rainwater collected in the ponds helps to augment ground water. The rain water collected is being used for various activities like dust suppression, greenbelt development to conserve fresh water and reduce the water requirement from the ground water. The mined out pit will also be used to collect rainwater, once the Limestone is fully excavated from the pit. An action plan to collect & use rain water and conserve water submitted to Regional Office of MoEF at Bangalore. If needed, capacity of the reservoir will be enhanced to meet the maximum water requirement. Only balance water requirement will be met from other sources.

S.No	Specific Condition	Compliance Status
xiv.	Total requirement of the ground water from bore wells should not exceed 900 m^3 /day. The water stored in the artificial reservoir made in the mine pit should be used maximum to reduce ground water consumption. No effluent should be discharged from the mine to any water body or nearby river.	The ground water drawl from bore wells being limited to 900 m^3 /day for the existing operations. The water stored in the pond at the mine pit being used to a maximum extent to reduce ground water consumption. No effluent is getting discharged from the Mine to any water body or nearby river as there is no industrial effluent generation and the domestic effluent is treated in septic tank followed by dispersion trench.
xv.	Detailed hydrological study should be carried out since mining activities are likely to intercept ground water and implementation of recommendations of the detailed hydrological study should be ensured.	Detailed hydro-geological logical had been carried out. The recommendations of hydro-geological study are under implementation.
xvi.	Permission should be obtained for drawl of ground water from the State Ground Water Board/Central Ground Water Authority as may be applicable in this case.	Permission obtained from Central Ground Water Board for drawl of ground water for the existing operations.
xvii.	Top soil, if any, should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	The top soil viz., Black Cotton Soil (BCS) is being used for formation of bunds for the rainwater harvesting ponds and also for the formation of bunds along the boundary of the Mining Lease area and the safety zone . The balance BCS will be stacked with proper slope at earmarked site only with adequate measures like retention wall, gully plugs and trenches. The balance BCS available will be used for reclaiming mined out pits. The unreclaimed pits will be left as rainwater harvesting pits.

S.No	Specific Condition	Compliance Status
xviii.	The project proponent should ensure that no natural water course should be obstructed due to any Mining and Plant operations. The company should make the plan for protection of the natural water course passing through the plant and mine area premises and submit to the Mininstry's Regional Office at Bangalore.	No natural water course will be obstructed due to any Mining and Plant operations. The protection Plan of natural water course includes, development of safety barrier of 50 m width along the sides of the seasonal nallah with a bund erected with top soil and development of greenbelt in the safety barrier.
xix.	The inter burden and other waste generated should be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps should not exceed 30 m in three terraces of 10 m each and the over all slope of the dump should be maintained to 28^0. The inter burden dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry Of Environment & Forests and its Regional Office, Bangalore on six monthly basis.	There will not be any generation of inter-burden or other wastes from the mines. The balance top soil viz., Black Cotton Soil (BCS), after using for formation of bunds of rainwater harvesting ponds, the safety barriers and bunds along the boundary of the Mining Lease area, will be stacked at specified location adhering to the conditions stipulated by MoEF. The total height of the dumps will not exceed 30 m in three terraces of 10 m each and the over all slope of the dump would be maintained at 38 ^{o}C. The slopes of the bunds of rainwater harvesting ponds, boundary and the safety barrier will be planted with native species. The balance BCS available, will be used for reclaiming mined out pits. The unreclaimed pits will be left as rainwater harvesting pits. The reclaimed portion of the mined out pit, will be vegetated and the monitoring & management will be continued till the vegetation becomes self-sustaining. Compliance status is being submitted to the MoEF Regional office, Bangalore on six monthly basis.

S.No	Specific Condition	Compliance Status
xx.	The void left unfilled should be converted into water body. The higher benches of excavated void /mining pit should be terraced and plantation done to stabilize the slopes. The slope of higher benches should be made gentler for easy accessibility by local people to use the water body. Peripheral fencing should be carried out along the excavated area.	The void left unfilled will be finally converted into water body. At the final stage the top benches will be re-graded to form a gentle slope where plantation will also be undertaken. Peripheral fencing will be carried out along the excavated area. Considering the safety of the people , they will not be allowed inside the mines area. As a part of CSR initiative, the supply of water to the nearby villages will be taken up.
xxi.	Catch drains and siltation ponds of appropriate size should be constructed for the working pit, inter burden and mineral dumps to arrest flow of silt and sediment. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted, particularly after monsoon, and maintained properly.	There is no inter burden waste generation. The mineral viz., , Limestone mined will be directly sent to factory and no storage of the same is envisaged. For collecting the rainwater, catch drains of size 0.7m by 0.8 m size , to arrest flow of silt have been provided to prevent solid soil particles reaching rainwater harvesting ponds .The water so collected will be utilized for watering the mine area, roads, green belt development etc. The trenches/drains will be regularly desilted, particularly after monsoon, and maintained properly. The silt so collected is used in the afforestation works.
xxii.	Garland drain of appropriate size, gradient and length should be constructed for both mine pit and inter burden dumps and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 year data) and	There is no inter burden waste generation. Garland drain of 0.7m width, 0.8m depth with a slope of 1 in 150 have been constructed, which will be extended year after year for the mines and for the soil stacks. 6 ponds with a total combined

S.No	Specific Condition	Compliance Status
	maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	capacity of 9,02, 000 m^3 have already been provided in the Plant & Mine area to serve as rainwater harvesting structure. The sump at the bottom of the pit is used to collect the rainwater falling in the pit. The rainwater falling outside the Mine Pit will be directed to rainwater harvesting ponds through the catch drains/garland drains .Thus , adequate rainwater collection facility is available. Pit bottom sump has been provided with adequate retention capacity to allow proper setting of silt material. Since this being a Limestone mine, the Lime particles will act as coagulants for quick settling of particles. Sedimentation pits have been constructed at the corners of the garland drains and desilted at regular intervals.
xxiii.	Dimension of the retaining wall at the toe of inter burden dumps and inter burden benches within the mine to check run-off and should be based on the rain fall data.	There is no generation of interburden wastes. Hence, inter burden dumps and inter burden benches are envisaged. After using the top soil viz., Black Cotton Soil (BCS) for various bund formation, the balance will be stacked at specified location. This top soil stack will be provided with toe wall / rubble walls of 1.50 m height and 1.50 m width.
xxiv.	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations by the project proponent in and around project area in consultation with	Ground water quality and level are being monitored. The data collected, four times a year as stipulated, are being submitted to Ministry of Environment and Forests & Climate Change and its Regional Office at Bangalore, Central Ground water Authority and State Ground Water Board.

S.No	Specific Condition	Compliance Status
	Regional Director, Central Ground Water Board. The frequency of monitoring should be four times a year-pre-monsoon (April/May), monsoon (August), post-monsoon (November), and winter (January). Data thus collected should be sent at regular intervals to Ministry of Environment and Forests and its Regional Office at Bangalore, Central Ground water Authority and State Ground Water Board.	Also, two piezometers have been installed. The data on ground water level is being submitted to Ministry of Environment and Forests & Climate Change and its Regional Office at Bangalore, Central Ground water Authority and State Ground Water Board.
xxv.	Wet drilling sequential and controlled blasting method and provision for the control air emissions during blasting using dust collectors etc. should be used. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Wet drilling is practiced. The blast holes are fired with Electrical Detonators & Detonation Fuse adopting Trunk Line Detonation system. This system allows only one hole i.e. 80 kg, a fraction of the total explosives to blast at a point of time which minimizes boulder generation, frequent toe occurrence, fly rock generation.The charge per delay in the mine will never exceed 400 kg. As per the numerical estimation done with this charge per delay, the peak particle velocity calculated at a distance of 500m is only 2.5 to 3.0 mm/sec, which is within the permissible limits prescribed by DGMS. Water spray is provided for the control of air emissions during blasting.
xxvi.	Bench height, width and slope for individual bench should be properly assessed and implemented. Adequate measures should be adopted to stabilize the slope before abandonment. The fencing around the reservoir should be provided to prevent accidents.	The bench height for the soil is maintained at 1.7m and that of Limestone bench is 9m each. Width is about 12 m with a working pit slope angle of around 38^{o}. Adequate measures viz., gentle slope, terracing and plantation will be ensured to stabilize the

S.No	Specific Condition	Compliance Status
		Slope before abandonment. Fencing around the rainwater harvesting reservoirs will be provided to prevent accidents.
xxvii.	Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure should be submitted to the Ministry and its Regional Office at Bangalore.	There is no over burden. The details of mining and handling of top soil viz., Black Cotton Soil (BCS), as per Mining Plan has been included in the EIA Report submitted to the Ministry and its Regional Office at Bangalore. The final mine closure plan will be submitted , 5 years in advance of mine closure. The average thickness of BCS is 1.7 m. The BCS removed will be used for forming bunds. The balance BCS, after using for formation of bunds of rainwater harvesting ponds, the safety barriers and bunds along the boundary of the Mining Lease area, will be stacked at specified location with adequate control measures The total height of the dumps will not exceed 30 m in three terraces of 10 m each and the over all slope of the dump would be maintained at 38 ^{o}C. The slopes of the bunds of rainwater harvesting ponds, boundary and the safety zone will be planted with native species. The balance BCS available will be used for reclaiming mined out pits. The unreclaimed pits will be left as rainwater harvesting pits.
xxviii.	As proposed, greenbelt should be developed in 48 ha in plant & township and 10 ha around the mining area as per the the CPCB Guidelines in consultation with DFO.	In consultation with DFO, the greenbelt has been developed over an area of 56.68 ha by planting 90,549 saplings **in the Plant area** and over an area of 24.93 ha by planting 47,924 saplings **in the Mine area**, following the guidelines of CPCB.

S.No	Specific Condition	Compliance Status
xxix.	All the recommendations of the Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be strictly followed.	CREP guidelines are complied with.
xxx.	Vehicular emissions should be kept under control and regularly monitored. Measures should be taken for maintenance of vehicles used in mining operation and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.	The vehicles with Pollution Under Control Certificate only being permitted inside the mining area. Proper maintenance of vehicles also being ensured. Use of tarpaulin to cover the material to be transported has been made mandatory. No overloading of materials will be permitted.
xxxi.	Risk and Disaster Management plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, KPCB and CPCB within 3 months of issue of environment clearance letter.	Details of Risk and Disaster Management Plan along with the mitigation measures submitted to CPCB,KSPCB and Regional Office of MoEF at Bangalore .
xxxii.	Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Final Mine Closure Plan along with details of Corpus Fund will be submitted to the Ministry of Environment, Forest & Climate Change, 5 years in advance of final mine closure for approval.
xxxiii.	The company should comply with the commitments made during public hearing held on 30th December,2009 and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional office at Bangalore.	The commitments made in Public Hearing are part of the EMP/CSR. Hence, no separate budget is required. Implementation of EMP & CSR Plan are covered in this compliance report, which is submitted regularly to MoEF,Banaglore.
xxxiv.	At least 5% of the total cost of the project should be earmarked towards the Corporate Social Responsibility and item-wise details along with time bound action	5 % of the total cost of the project had been earmarked towards Corporate Social Responsibility (CSR). A time bound action plan with item-wise details prepared and submitted to the Ministry's

S.No	Specific Condition	Compliance Status
	plan should be prepared and submitted to the Ministry's Regional Officer at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.	Regional Officer at Bangalore. Implementation is being ensured. The details of CSR activities that area being carried out are being submitted along with this compliance report to all concerned authorities.
xxxv.	Provision should be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	For the construction labour , within the site, all necessary infrastructure and facilities had been provided. The temporary structures (house) had been removed after the completion of the project.

B. GENERAL CONDITIONS

S.No	General Condition	Compliance Status
i.	The project authority shall adhere to the stipulations made by Karnataka State Pollution Control Board (KPSB) and the State Government.	Stipulations of Karnataka State Pollution Control Board (KSPCB)/State Government are complied with.
ii.	No further expansion or modernization of the plant shall be carried out without prior approval of this Ministry	No further expansion or modernization of the plant will be carried out without prior approval of this Ministry.
iii.	Atleast four ambient air quality monitoring stations shall be installed in the downward wind direction as well as where maximum ground level concentration of PM_{10}, SO_2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office and SPCB and CPCB once in six months	7 number of air quality monitoring stations have been installed in consultation with KPCB. Data on ambient air quality and stack emissions being regularly submitted to MoEF &CC, Delhi, MoEF& CC Regional Office and SPCB and CPCB, once in six months.

S.No	General Condition	Compliance Status
iv.	Industrial Waste water shall be collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The treated water shall be utilized for plantation purpose.	The industrial waste water is being collected and treated. The quality of treated effluent will conform to standards prescribed. Treated water is being used for plantation and dust suppression.
v.	The overall noise levels in and around the plant shall be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers,enclosures etc., on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental Protection Act 1986 viz., 75 dBA (day time) and 70 dBA (night time)	For all sources of noise generation, control measures viz., acoustic hoods/silencers/ enclosures provided. The overall noise levels in and around the plant being kept well within the standards. Ambient Noise level is being monitored at 7 stations.These ambient noise levels conform to the standards prescribed 75 dBA (day time) and 70 dBA (night time).
vi.	Proper housekeeping and adequate occupational health programme shall be taken up. Occupational health surveillance programme shall be done on a regular basis and records maintained properly atleast for 30 - 40 years. The programme shall include lung function and sputum analysis test once in six months. Sufficient preventive measures shall be adopted to avoid direct exposure to dust	Good house keeping is being ensured. Occupational health surveillance programme as suggested is being carried out on a regular basis and the records are also being maintained. Sufficient preventive measures viz., Dust mask provided to employees to avoid direct exposure to dust apart from taking precautions and ensuring measures to control dust.
vii.	The company shall undertake eco development measures including community welfare measures in the project area.	Eco-development measures like rain harvesting, use of hot gases for generation of power, water conservation measures etc, have been taken. Community development measures are also being carried out and the details are being submitted along with this compliance report to concerned

S.No	General Condition	Compliance Status
		authorities.
viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP	The environmental protection measures and safeguards provided as recommended in EIA/EMP are being implemented.
ix.	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a senior executive	Separate environmental management cell and environmental monitoring systems have been put in place. For analysis of samples, third party, approved laboratory facilities are being utilized.
x.	Adequate fund shall be allocated to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government. Time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted. The funds so provided shall not be diverted for any other purpose	Adequate fund has been allocated to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government . The funds so provide is not diverted for any other purpose. The action taken to comply with the conditions stipulated in the Environmental Clearance is being updated in the compliance report while submitting the same to all concerned authorities.
xi.	The project proponent shall also submit six monthly reports on the status of compliance of stipulated EC conditions including results of monitored data (both in hard copies as well as by emails) to the respective Regional Office of MoEF and respective zonal office of CPCB and KSPCB.	Six monthly reports on the status of compliance of stipulated EC conditions including results of monitored data are being submitted in hard copies as well as by emails to the Regional Office of MoEFCC, Bangalore and CPCB, Bangalore and KSPCB.
xii.	The Regional Office of this Ministry /CPCB/KPCB shall monitor the stipulated conditions. The project authorities shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information /monitoring reports. A six monthly compliance report and the monitored	Full cooperation will be extended to the officer (s) of the Regional Office by furnishing the requisite data/information /monitoring reports. A six monthly compliance report and the monitored data are being submitted to the Regional Office of MoEFCC, CPCB and KSPCB.

S.No	General Condition	Compliance Status
	date along with statistical interpretation shall be submitted to them regularly.	
xiii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work	As internally accrued funds had been invested there was no need of financial approval of project by any authority and the financial closure. The date of commencement of ground work had been communicated to MoEFCC, Delhi & MoEFCC,Bangalore.
xiv.	No change in the mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests. No change in the calendar plan including excavation , quantum of limestone and waste shall be made.	No change in the mining technology and scope of working will be made without prior approval of the MoEFCC. Also, no change in the calendar plan including excavation, quantum of limestone and waste will be made.
xv.	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc., shall be provided with ear plugs/muffs	Noise Control Measures like silencers/barriers/ acoustic enclosures had been provided to control noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc., have been provided with ear plugs/muffs.
xvi.	Industrial waste water from workshop and waste water from mine shall be properly collected ,treated so as to conform to the standards prescribed under GSR 422 (E) date 19th May 1993 and 31st Decemnber 1993 or a amended from time to time, Oil and grease trap shall be installed before discharge of workshop effluents.	No waste water is getting generated form the existing Mine. The vehicles and the mining machinery used for the existing mining operation are maintained by the mining contractor at the workshop in Chincholi. No waste water is generated from the mine. The rain water collected, after sedimentation is being used for afforestation, dust control and in the Plant. However, a Common Workshop will be provided with oil & grease trap in the Plant premises, adjacent to the Mining Lease Area and the same workshop will cater to the requirement of Mine also.

S.No	General Condition	Compliance Status
xvii.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure of dust and take corrective measures ,if needed	Personnel working in dusty areas have been provided with masks.Training and information on safety and health aspects have also been given to personnel working in dusty areas. Occupational health surveillance program of the workers in dusty area will be undertaken periodically to find out whether any impact due to exposure of dust is there.Corrective measures ,if needed will be taken.
xviii.	The project authorities shall inform to the Regional Office regarding date of final closures and final approval of the project by the concerned authorities and the date of start of land development work	As internally accrued funds had been invested there was no need of financial approval of project by any authority and the financial closure. The date of commencement of ground work had been communicated to MoEF, Delhi & MoEF,Bangalore
xix.	A copy of clearance letter shall be marked to the concerned Panchayat /local NGO, if any from whom suggestion /representation , if any was received while processing the proposal.	Environmental Clearance copy sent to Gram Panchayat of Miryana and Anwar.
xx.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad /Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions /representations if any were received while processing the proposal. The clearance letter shall also put up on the website of the company by the proponent.	Environmental Clearance copy sent to Gram Panchayat 0f Miryana and Anwar. The clearance letter has also been put up in the website of our company.
xxi.	The project authorities shall advertise atleast in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned within 7 days of the issue of clearance letter informing that the project has been accorded environmental	Advertisement was released in Kannada Prabha & New Indian Express , Bangalore on 26th Jun 2010 & Kannada Prabha, Gulbarga division on 27th Jun 2010 that the project has been accorded environmental clearance and a copy of the clearance letter is available with its Karnataka State Pollution Control

S.No	General Condition	Compliance Status
	clearance and a copy of the clearance letter is available with its Karnataka State Pollution Control Board and also at website of the Ministry of Environment and Forests at "http://enfor.nic.in and a copy of the same shall be forwarded to the Regional Office of this Ministry.	Board and also at website of the Ministry of Environment and Forests at "http://enfor.nic.in. Copies of the advertisement submitted to MoEF Regional Office, Bangalore vide our letter CHETTINAD CEMENT/MoEF/KAL.PROJ/538 dated 06.07.2010.
xxii.	The environment statement for each financial year ending 31st March in Form V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under Environmental (Protection) Rules 1986 as amended subsequently , shall also be put on the website of the company along with status of compliance of EC conditions and shall also be sent to the respective regional office of MoEF by email.	Environment statement for the year 2016-17 in Form V submitted on 29.09.2017 in hard copy as well as by email to KSPCB & MoEF Regional Office, Bangalore and also uploaded in the company website. The status of compliance of EC conditions has also been put in the website of our company.

OTHER CONDITIONS

S No	Other Condition	Compliance Status
10	The Ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry.	Guidelines noted and the additional conditions stipulated will also be complied with.
11	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Guidelines noted.
12	Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a	Guidelines noted. Any other condition or alteration in any condition will also be implemented as applicable.

S No	Other Condition	Compliance Status
	time bound manner	
13	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, Second Floor, Trikoot-I, Bhikaji Cama Place, New Delhi-110066, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997	Noted.
14	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted.

for **Chettinad Cement Corporation Private Limited,**

C Janaradhana Reddy,
Joint President (Works).

Appendix 2

Chettinad Cement Corporation Private Limited (Kallur Works & Mine)													
Sangem K & Kallur Villages, Kalaburagi District , Karnataka													
Ambiant Air Quality Monitoring- Consolidated Report (Apr '18 - Sept '18)													
S.No	Location	PM_{10} (µg/m^3)			$PM_{2.5}$ (µg/m^3)			SO_2 (µg/m^3)			NOx (µg/m^3)		
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
1	ML Area	63.0	29.0	48.5	48.0	17.0	26.4	15.0	6.0	10.1	18.0	9.0	13.5
2	Miryan Village	58.0	29.0	45.9	32.3	15.0	24.2	14.0	6.0	10.0	18.0	8.0	12.9
3	Polkampalli Village	62.0	30.0	42.2	40.0	16.0	24.0	13.0	6.0	9.4	19.0	9.0	12.9
4	Bhaktampalli Village	68.0	30.0	48.8	42.0	18.0	27.0	13.0	5.0	9.6	18.0	9.0	12.9
5	Somalingdahalli Village	56.0	28.0	43.5	34.2	15.0	23.5	13.0	6.0	9.7	18.0	9.0	12.9
6	Kalllur Village	62.0	28.0	45.3	42.0	15.0	25.1	14.0	5.0	9.8	18.0	8.0	12.8
7	Factory Area	67.0	30.0	49.0	39.0	15.0	26.0	15.0	6.0	10.2	18.0	9.0	13.2
Limit		100 µg/m^3			60 µg/m^3			80 µg/m^3			80 µg/m^3		

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Appendix 3

Chettinad Cement Corporation Private Limited (Kallur Works & Mine)								
Sangam K & Kallur Villages ,Kalaburagi District, Karnataka								
Noise Level Monitoring- Consolidated Report (Apr 18 to Sept '18)								
S.No	Location	UoM	Day			Night		
			L_{min}	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}
Within the Premises								
1	Core Zone ML Area	dB(A)	41.0	54.6	59.2	34.8	41.4	45.6
2	Factory Area	dB(A)	37.3	52.6	57.5	35.0	48.6	51.9
Limit (L_{eq})		dB(A)	75			70		
S.No	Location	UoM	Day			Night		
			L_{min}	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}
Outside the Premises								
1	Miryan Village	dB(A)	37.5	48.4	53.6	35.0	39.1	43.2
2	Polkampalli Village	dB(A)	37.0	48.6	53.8	34.3	38.9	42.8
3	Bhaktampalli Village	dB(A)	39.8	49.6	54.6	35.0	39.7	45.5
4	Somalingadhalli Village	dB(A)	36.0	47.6	52.9	35.0	38.0	42.6
5	Kallur Village	dB(A)	40.0	50.6	55.3	35	41.6	44.8
Limit (L_{eq})		dB(A)	55			45		

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Chettinad Cement Corporation Private Limited (Kallur Works & Mine)
Sangam K & Kallur Villages,Kalaburagi District,Karnataka

Ground Water Quality Monitoring Report(Apr '18 - Sept '18)

S. No	Parameter	UoM	GW 1		GW 2		GW 3		GW 4		GW 5		GW 6		Permissible Limts
			May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	
i	Colour	Hazen Units	1	1	1	1	1	1	2	1	2	2	<1	1	15
ii	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
iii	pH		7.80	7.44	7.92	7.32	7.27	7.28	7.16	7.77	7.32	7.07	7.88	7.70	6.5 - 8.5
iv	Taste		Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
v	Turbidity	NTU	0.8	1.2	0.6	0.5	0.5	0.7	0.7	1.2	0.6	2.9	0.5	<1	5
vi	Total Dissolved Solids	mg/l	680	550	820	890	390	590	620	690	408	1470	416	580	2000
vii	Aluminium as Al	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.2
viii	Ammonia as total Ammonia -N	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5
ix	Anionic Detergents (as MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.0
x	Barium as Ba	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.7
xi	Boron as B	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1
xii	Calcium as Ca	mg/l	128.0	108.0	144.0	176.0	74.0	114.0	96	60	92	100	76	84	200
xiii	Chloride as Cl	mg/l	100	55	150	175	42	107	95.0	102.0	28.0	375.0	36.0	70.0	1000
xiv	Copper as Cu	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.5
xv	Fluoride as F	mg/l	0.72	1.10	0.86	<0.1	0.26	1.42	1.02	1.32	0.77	1.23	0.49	1.34	1.5
xvi	Residual, Free Chlorine,	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1
xvii	Iron as Fe	mg/l	0.05	0.06	0.09	0.07	<0.05	0.07	0.07	0.08	0.09	0.05	0.06	0.07	1.0
xviii	Magnesium as Mg	mg/l	48.6	37.6	58.0	58.0	30.0	51.0	39	30	29	85	32	39	100
xix	Manganese as Mn	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.3
xx	Mineral Oil	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5
xxi	Nitrates as NO_3	mg/l	35.0	21.0	32.0	19.0	18.0	25.0	24	35	18	38	30	34	45
xxii	Phenolics (C_6H_5OH)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
xxiii	Selenium as Se	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
xxiv	Silver as Ag	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.1
xxv	Sulphates as SO_4	mg/l	75.0	27.0	102.0	33.0	24.0	29.0	36	36	42	73	36	35	400
xxvi	Sulphide as H_2S	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05
xxvii	Alkalinity as $CaCO_3$	mg/l	390	450	480	490	280	415	450	470	275	500	300	355	600
xxviii	Total Hardness as $CaCO_3$	mg/l	520	425	600	580	310	495	400	275	300	150	320	375	600
xxix	Zinc as Zn	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	15
xxx	Cadmium as Cd	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003
xxxi	Cyanide as CN	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05
xxxii	Lead as Pb	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
xxxiii	Mercury as Hg	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001
xxxiv	Nickel as Ni	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
xxxv	Arsenic as As	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
xxxvi	Chromium as Cr^{+6}	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05
xxxvii	Total Coliform	Mpn/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0
xxxviii	E-Coli	cfu/100ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	0

GW1 : Mirayan Village Bore Well Water
GW2 : Bhaktampalli Village Bore Well Water GW3 : Polkampalli Village Bore Well Water GW4 : Pardhi Motakpalli Village Bore Well Water GW5 : Somalingadahalli Village Bore Water

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Appendix 5

Chettinad Cement Corporation Private Limited (Kallur Works & Mine)

Sangem K & Kallur Villages,Kalaburagi District ,Karnataka

Surface Water Quality Monitoring Report(Apr '18 to Sep '18)

S. No	Parameter	UoM	SW 1		SW 2		SW 3		SW 4		SW 5		SW 6		*Permissible Limits
			May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	May'18	Jul'18	
i	pH	-	8.10	7.89	8.16	7.95	8.02	7.77	7.98	7.97	8.02	7.14	8.20	7.63	6.5 to 8.5
ii	Dissolved Oxygen (as O_2)	mg/l	5.7	5.7	5.0	5.1	5.5	5.5	5.8	5.8	5.3	4.5	4.8	5.2	Min 4
iii	Biochemical Oxygen Demand (as O_2),	mg/l	1.4	1.1	1.8	1.8	1.5	1.4	1.2	1.2	1.6	2.2	1.1	1.5	3
iv	Total Coliform	(mpn/100ml)	68	48	75	65	52	62	46	70	50	62	68	53	5000
v	Colour	(Hazen Units),	5	5	5	5	5	5	5	5	5	5	5	5	300
vi	Fluoride (as F)	mg/l	<0.1	0.50	<0.1	<0.1	<0.1	0.68	<0.1	<0.1	<0.1	0.43	<0.1	<0.1	1.5
vii	Cadmium (as Cd)	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
viii	Chloride (as Cl),	mg/l	36.0	30.0	38.0	30.0	18.0	27.0	20.0	92.5	24.0	97.3	19.0	61.0	600
ix	Chromium (as Cr^{+6})	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05
x	Cyanides (as CN),	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05
xi	Total Dissolved Solids	mg/l	280	350	300	348	180	190	260	500	272	490	176	220	1500
xii	Selenium (as Se)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
xiii	Sulphates as SO_4	mg/l	10.8	20.4	11.6	20.2	5.5	19.1	9.2	34.5	10.4	35.4	3.8	25.0	400
xiv	Lead (as Pb)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
xv	Copper (as Cu)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.5
xvi	Arsenic as As	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.2
xvii	Iron (as Fe)	mg/l	<0.05	0.07	<0.05	0.05	<0.05	0.05	<0.05	0.07	<0.05	0.05	<0.05	0.06	50
xviii	Phenolic compounds (as C_6H_5OH)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
xix	Zinc (as Zn)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	15
xx	Anionic detergents (as MBAS)	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1
xxi	Oils and grease	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
xxii	Nitrates (as NO_3)	mg/l	7.6	11.1	8.2	8.8	2.8	4.9	5.5	2.8	6.0	5.5	6.6	9.2	50

SW1 : Mullamari Rriver Upstream Water
SW2 : Mullamari River Downstream Water
SW3 : Lingadahailli Reservior Water,
SW4 : Kulwala Nallah Upstream Water
SW5 : Kulwala Nallah Downstream Water
SW6 : Pond Water Near Miryan Village

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Appendix 6

Chettinad Cement Corporation Private Limited (Kallur Works)							
Sangam K Village ,Kalaburagi District, Karnataka State							
Stack Emission Monotoring- Consolidated Report (Apr '18 to Sept '18)							
S.No	**Stack Connected to**	**Parameter**	**UoM**	**Norms**	**Max**	**Min**	**Avg**
1	Raw/Kiln	**Particulate Matter**	**mg/Nm^3**	**30**	27.0	21.0	24.8
2	Cooler				25.0	20.0	22.7
3	Coal Mill				25.0	19.0	22.3
4	Cement MIll-1				25.0	21.0	23.0
5	Captive Power Plant - Boiler	**Particulate Matter**	**mg/Nm3**	**50**	26.0	21.0	22.8

S.No	Stack Connected to	Parameter	UoM	Norms	Max	Min	Avg
1	Raw/Kiln	**SO_2**	**mg/Nm^3**	**100**	23	20	21.3
2	Captive Power Plant- Boiler			**600**	381	318	345.2

S.No	Stack Connected to	Parameter	UoM	Norms	Max	Min	Avg
1	Raw/Kiln	**NOx**	**mg/Nm^3**	**800**	386	137	296.7
2	Captive Power Plant - Boiler			**300**	166	135	148.8

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)

Appendix 8

Chettinad Cement Corporation Private Limited (Kallur Works & Mine)

Sangem K & Kallur Villages, Kalaburagi District , Karnataka

CSR Report (Apr'18-Sept '18)

S No	Activity details	Apr'18-Sept '18 (Rs lakhs)
EDUCATION		
1	Salaries to 4 nos of teachers for Govt. School at Kallur	0.84
2	Salaries to 2 nos of teachers for Govt.School at Sangam-K	0.4
3	Salaries to 1 no of teacher for Govt.School at Bhaktampalli	0.2
4	Govt.Primary school room renovation at Garagpalli village	2.81
	Sub Total	4.25
INFRA-STRUCTURE DEVELOPMENT		
1	Chalivendrum at Kuncharam-X road	0.3
2	Construction of borewell at Kallur village	1
3	Drilling of borewell at Somalingadalli village	0.96
4	Installation of High Mast Tower at Kallur village	3.43
	Sub Total	5.69
	Total	9.94

for **Chettinad Cement Corporation Private Limited**

C Janaradhana Reddy
Joint President (Works)